

Myocardial defect detected by ^{123}I -BMIPP scintigraphy and left ventricular dysfunction in patients with idiopathic dilated cardiomyopathy

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The present study examined the role of myocardial fatty acid in patients with idiopathic cardiomyopathy (DCM) by means of ^{123}I - β -methyl-p-iodophenyl pentadecanoic acid (^{123}I -BMIPP) scintigraphy. Thirteen patients underwent ^{123}I -BMIPP imaging, ^{201}Tl imaging and echocardiography. All patients showed defective myocardial uptake of ^{123}I -BMIPP and ^{201}Tl . The left ventricular end-diastolic dimension (64.1 ± 7.3 mm vs. 55.6 ± 1.5 mm, $p < 0.05$) and end-systolic dimension (52.4 ± 8.0 mm vs. 40.6 ± 2.1 mm, $p < 0.01$) were significantly larger in the large defect group (^{123}I -BMIPP defect score (DS) > 8) than the small defect group (DS < 7). The % fractional shortening (%FS) was also significantly smaller ($18.6 \pm 3.8\%$ vs. $27.0 \pm 3.3\%$, $p < 0.01$) in the large defect group. The ^{123}I -BMIPP DS correlated statistically with %FS ($r = 0.75$, $p < 0.01$), while the ^{201}Tl DS did not ($r = 0.41$, ns). We conclude that the patients with DCM revealed a ^{123}I -BMIPP uptake defect and the defect reflected the degree of left ventricular dysfunction.

Key words: DCM, ^{123}I -BMIPP, ^{201}Tl , echocardiography, left ventricular function